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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,550	03/20/2007	Motoyuki Ohtake	SON-3439	4912

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EXAMINER

SPECTOR, DAVID N

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,550	Applicant(s) OHTAKE, MOTOYUKI	
	Examiner David N. Spector	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006 through 07 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 5-8 and 13-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/02/06; 8/16/07; 6/19/08</u> . | 6) <input type="checkbox"/> Other: _____ |

THE FOLLOWING IS A QUOTATION OF 35 U.S.C. 103(A) WHICH FORMS THE BASIS FOR ALL OBVIOUSNESS REJECTIONS SET FORTH IN THIS OFFICE ACTION:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yahagi (JP 07-261080 A) in view of Ishii (JP 2002-098805 A).

In regard to claim 1 Yahagi discloses a zoom lens (**FIG. 2A-2C**) comprising, in order from the object side, a first lens group **G1** having positive refractive power, a second lens group **G2** having negative refractive power, a third lens group **G3** having positive refractive power, a fourth lens group **G4** having positive refractive power and a fifth lens group **G5** having positive refractive power, wherein during zooming from wide angle end to a telephoto end, the first lens group **G1** is fixed along the optical axis, the second lens group **G2** moves to the image side, the third lens group **G3** is fixed, the fourth lens group **G4** compensates for the fluctuation of the image plane position due to the shift of the second lens group **G2** and moves along the optical axis for close-distance focusing, and the fifth lens group **G5** is fixed; an aperture diaphragm **r11** is disposed in the vicinity of the third lens group **G3**; the fifth lens group **G5** includes a negative sub lens group **r18|r19** and a positive sub lens group **r20|r21**; and the zoom lens satisfies inequalities $0.6 < f5p/Da < 1.4$ (Yahagi; Page 5, **Table I: $f5p/Da = 1.39$** ; with **f5p** = 13.979 and **Da** = 10) where **f5p** = focal length of the positive sub lens group disposed in the fifth lens group **G5**, and **Da** = length extending along the optical axis to a paraxial image position from a most-imagewise surface of the positive sub lens group disposed in the fifth lens group **G5**.

Yahagi does not disclose the aforesaid zoom lens with a lens or lens group moving perpendicularly to the optical axis to correct for image shake/blurring. This feature, however, has already been employed for the same purpose in a similar zoom lens disclosed by Ishii, in which the rear-most lens group **G5-2|G5-3** thereof provides such a function. At the time of the instant invention, when the same result is to be achieved, it would have been obvious for one of ordinary skill in the art to apply the teaching from Ishii to the zoom of document Yahagi with corresponding effect (e.g. since the image-shake/blurring correction function is not functionally linked with, and is clearly independent from the other features of the zoom lens, inasmuch as

they are solutions of different independent problems). Independent claim 1 is therefore unpatentable over Yahagi, in view of Ishii.

In regard to claim 2 Yahagi discloses a zoom lens (**FIG. 2A-2C**) according to independent claim 1 which also satisfies the conditional equation $0.5 < f5p/D_b < 1.3$ (Yahagi; Page 5, **Table I: $f5p/D_b = 0.963$** ; with $f5p = 13.979$ and $D_b = 14.519$) where $f5p$ = focal length of the positive sub lens group disposed in the fifth lens group **G5**, and D_b = length extending along the optical axis to the aperture diaphragm from a most-object-side surface of the positive sub lens group disposed in the fifth lens group **G5**. Claim 2 is therefore unpatentable over Yahagi, in view of Ishii.

In regard to claim 3 Yahagi discloses a zoom lens (**FIG. 2A-2C**) according to independent claim 1 which also satisfies the conditional equation $0.3 < |f5n|/f_t < 0.9$ (Yahagi; Page 5, **Table I: $f5n/D_b = 0.525$** ; with $f5n = -21.354$ and $f_t = 40.69$) where $f5n$ = focal distance of the negative sub lens group disposed in the fifth lens group **G5**; and f_t is the focal length of the zoom lens system in the telephoto end mode. Claim 3 is therefore unpatentable over Yahagi, in view of Ishii.

In regard to claim 4 Yahagi discloses a zoom lens (**FIG. 2A-2C**) according to claim 2 which also satisfies the conditional equation $0.3 < |f5n|/f_t < 0.9$ (Yahagi; Page 5, **Table I: $f5n/D_b = 0.525$** ; with $f5n = -21.354$ and $f_t = 40.69$). Claim 4 is therefore unpatentable over Yahagi, in view of Ishii.

In regard to claims 9-12 The sole difference between claims 1-4 and claims 9-12, respectively is the feature/limitation which constitutes the preamble of independent claim 9: "An imaging apparatus comprising a zoom lens and an imaging device that converts an optical image formed through the zoom lens to an electric signal, the imaging apparatus being characterized in that:". The aforesaid feature/limitation is not given patentable weight, inasmuch as it only appears in the preamble; without any relationship to any of the features/limitations extant in the body of independent claim 9. Claims 9-12 are therefore unpatentable over Yahagi, in view of Ishii for the same reasons set forth above in this Office action, in regard to claims 1-4 of the instant application.

Claims 5-8 and 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. THE FOLLOWING IS A STATE-

MENT OF REASONS FOR THE INDICATION OF ALLOWABLE SUBJECT MATTER: in regard to claims 5-8 and 13-16, rewritten in independent form including all of the limitations of the base claim and any intervening claims, the prior art taken either singly or in combination fails to anticipate or fairly suggest a zoom lens comprising five individual lens units arranged in a [+ – + + +] characterized in that "the positive sub lens group [emphasis added] disposed in the fifth lens group includes at least one positive lens and one negative lens [emphasis added], taken together in combination with the totality of particular features/limitations recited therein.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. European Patent Application Publication No. EP 1 705 508 A1 presents another National Stage of International Application No. PCT/JP2005/018128, set forth in the English language. Yahagi (U.S. Patent No, 5,548,445) is a English-language version of JP 07-261080 A, which was cited by the present applicant under an Information Disclosure Statement filed on June 2, 2006. The International Preliminary Report on Patentability (Form PCT/IB/373) including the Written Opinion of the International Searching Authority (Form PCT/ISA/237) prepared for the parent (International Application No. PCT/JP2005/018128) of the instant National Stage on April 17, 2007, has been considered by the examiner in the prosecution of the instant application. The Extended European Search Report (Form 1507S) prepared for the European National Stage Application on May 5, 2008 has also been considered by the examiner in the prosecution of the instant application.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Any other inquiry concerning this communication or earlier communications from the examiner should be directed to David N. Spector whose telephone number is (571) 272-2338. The examiner can normally be reached at this number Monday through Friday between 6:00 AM and 2:30 PM. The Official FAX number for the United States Patent and Trademark Office is (571) 273-8300.

**/David N. Spector/
Primary Examiner, Art Unit 2873**